

WHAT IS CLAIMED IS:

1. A motor, comprising:
 - a rotatably supported rotor core; and
 - permanent magnets disposed at equal intervals at a plurality of positions in a circumferential direction of the rotor core, wherein the rotor core is provided with projecting poles formed at equal intervals at a center between each permanent magnet, an opening angle center line of each projecting pole conforms to a center line of an angle created by each opening angle center line of two adjacent permanent magnets, and each projecting pole is shaped asymmetrical to a line connecting a center of the projecting pole in a rotational direction of the rotor core and an axis center of the rotor core.
2. The motor of claim 1, wherein the opening angle center line of the projecting poles is the same as the line connecting the center of the projecting pole in the rotational direction of the rotor core and the axis center of the rotor core.
3. The motor of claim 1, wherein a tapered portion is formed from a front edge of the projecting pole in the rotational direction of the rotor core to a position set slightly back from the opening angle center line of the projecting pole.
4. The motor of claim 3, wherein a flat portion is formed from an end of the tapered portion to a rear edge of the projection pole in the rotational direction of the rotor core.
5. The motor of claim 1, wherein grooves are formed between the permanent magnets and the projecting poles.
6. A motor, comprising:
 - a rotatably supported rotor core; and
 - permanent magnets disposed at equal intervals at a plurality of positions in a circumferential direction of the rotor core, wherein the rotor core is provided with projecting poles formed at equal intervals at a center between each permanent magnet, an opening angle

center line of each projecting pole conforms to a center line of an angle created by each opening angle center line of two adjacent permanent magnets, and an air gap on a side downstream from a center of the projecting pole in a rotational direction of the rotor core is larger than an air gap on an upstream side with respect to each projecting pole.

7. The motor of claim 6, wherein a tapered portion is formed from a front edge of the projecting pole in the rotational direction of the rotor core to a position set slightly back from the opening angle center line of the projecting pole.

8. The motor of claim 7, wherein a flat portion is formed from an end of the tapered portion to a rear edge of the projection pole in the rotational direction of the rotor core.

9. The motor of claim 6, wherein grooves are formed between the permanent magnets and the projecting poles.

10. A motor, comprising:

a rotatably supported rotor core; and
permanent magnets disposed at equal intervals at a plurality of positions in a circumferential direction of the rotor core, wherein the rotor core is provided with projecting poles formed at equal intervals at a center between each permanent magnet, an opening angle center line of each projecting pole conforms to a center line of an angle created by each opening angle center line of two adjacent permanent magnets, and a tapered portion is formed on a front half portion of each projecting pole.

11. The motor of claim 10, wherein the tapered portion is formed from a front edge of the projecting pole in a rotational direction of the rotor core to a position set slightly back from the opening angle center line of the projecting pole.

12. The motor of claim 11, wherein a flat portion is formed from an end of the tapered portion to a rear edge of the projection pole in the rotational direction of the rotor core.

13. The motor of claim 10, wherein grooves are formed between the permanent magnets and the projecting poles.

14. A motor, comprising:

a rotatably supported rotor core; and

permanent magnets disposed at equal intervals at a plurality of positions in a circumferential direction of the rotor core, wherein the rotor core is provided with projecting poles formed at equal intervals at a center between each permanent magnet, an opening angle center line of each projecting pole conforms to a center line of an angle created by each opening angle center line of two adjacent permanent magnets, and a hole portion is formed on a front half portion of each projecting pole.

15. The motor of claim 14, wherein grooves are formed between the permanent magnets and the projecting poles.